

# How industry can deliver a sustainable railway together

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*Earth Day takes place every year on 22 April. The event has been running for over 50 years to raise awareness of the need to protect the Earth's natural resources. This year's theme is "Invest in Our Planet" with a strong focus on tackling climate change and investing in a green economy. Rail Partners' director of operator services Mark Gaynor writes how industry can deliver a sustainable railway together*

There's good alignment between the aims of Earth Day and the case for investing in rail. Rail is inherently a low-carbon, energy efficient mode of transport providing quick and direct access for passengers into town and city centres. And from a freight perspective, our recent report *Freight Expectations – How rail freight can support Britain's economy and environment* (1) highlights the significant environmental advantages of moving freight by rail rather than by road. Our analysis shows that a single freight train can remove up to 129 HGV movements and an average diesel-hauled freight service produces 76% less CO<sub>2</sub> per tonne than road transport.

However, as an industry we can't be complacent. Our customers – both passenger and freight – and our government funders quite rightly expect us to improve our environmental performance and play our part in decarbonising the wider economy.

Our competitor modes certainly aren't standing still. In recent years there's been a significant increase in the number of electric and hybrid vehicles with over 735,000 battery electric cars now on UK roads plus a further 480,000 plug-in hybrids. Those numbers are expected to increase rapidly in the coming years to meet the Government's commitment to end the sale of new petrol and diesel cars and vans by 2030 and for all new cars and vans to be fully zero emission by 2035.

So, what does rail need to do to maintain its green advantage over other modes in a low-carbon economy? I think that there are three key steps:

- Develop a decarbonisation plan (and stick to it!)
- Make better use of rail capacity
- Prepare for climate change
- Taking each of these in turn.

#### Develop a decarbonisation plan

Back in 2018, the then Rail Minister Jo Johnson, set an ambition to remove all diesel-only trains from the network by 2040 and challenged the industry to provide a vision for how it will decarbonise. This resulted in intensive cross-industry activity showing that it was feasible to decarbonise the railway and that we had the technologies to do it: primarily further electrification along with targeted use of battery and hydrogen powered trains. Rail definitely has the potential to become the backbone of a zero-carbon transport system: we know how to electrify and have innovative suppliers and operators who have successfully developed and trialled novel low carbon technologies such as battery and hydrogen trains. But the missing piece of the jigsaw remains a clear, stable and funded plan to invest in rail decarbonisation. If government can deliver this, it will stimulate operators and the supply chain to respond and, through a public-private partnership, deliver a fully decarbonised railway.

#### Make better use of rail capacity

Passenger numbers have bounced back strongly following the pandemic which is great news for the rail industry. We are, though, seeing different levels of recovery in different markets. For example, fewer people are now "traditional" five-day-a-week commuters and there has been growth in leisure journeys. Overall, there remains spare capacity on our railway which could be used to encourage a shift from more carbon intensive modes with the extra revenue also helping to reduce public subsidy. Giving train operators the right incentives and levers to attract more customers and revenue, for example through timetable adjustments, marketing campaigns or fare offers, would be a simple and cost-effective way of increasing demand for rail. Measures such as improving the accessibility of the rail network, making it easier and safer to walk and cycle to stations and integrating rail with other public transport systems would all help encourage more people to get out of their cars and catch the train.

Rail Partners has called on government to set an ambitious, but feasible target to treble rail freight by 2050. Our analysis shows that achieving such a target would cut carbon, reduce road congestion and improve air quality by removing over 20 million HGV journeys in 2050. It would also create £5.2bn in economic benefits annually by 2050. And having such a target would give freight operators and third parties the confidence to invest to grow the rail freight market.

## Prepare for climate change

The past eight years have been the hottest eight years on record, and we can expect global warming to continue because of record levels of greenhouse gases in our atmosphere. As well as increasing temperatures, we can also anticipate more extreme weather – torrential rain, high winds, drought – all of which can adversely affect the railway. Ensuring our infrastructure can cope with a changing climate will be critical to providing reliable and safe services to our passengers and freight customers. Priorities should include increasing investment in drainage, improving embankment stability, better real-time monitoring of infrastructure assets and updating infrastructure design standards to reflect a changing climate.

## What next?

None of the measures set out in this article are rocket science requiring radical new technologies. Yes, there are costs involved but there are also substantial benefits: increased revenue/reduced public subsidy, lower carbon emissions, healthier lives, and reduced road congestion.

Earth Day is about holding everyone to account in doing their part to tackle the climate crisis – whether it's governments, businesses or civil society. And within this sector, there is a compelling and realistic case for making rail the backbone of a zero-carbon transport system, but we first need a plan and political commitment to make it happen.

(1) <https://www.railpartners.co.uk/our-vision-for-rail/publications>